

IFM AFF

Docket No.: 1454.1079

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Rudolf KODES

Serial No. 09/889,666

Group Art Unit: 2123

Confirmation No. 6964

Filed: September 25, 2001

Examiner: Kandasamy THANGAVELU

For: METHOD AND DEVICE FOR PRETREATMENT

## APPELLANTS' BRIEF ON APPEAL UNDER 37 C.F.R. § 41.37

Mail Stop - Appeal Brief - Patents Commissioner for Patents PO Box 1450 Alexandria, VA 22313-1450

Sir:

The following comprises the Appellants' Brief on Appeal from the final rejection, dated April 7, 2008 of claims 5, 6, 7, 9, 11, 20, and 21. This Appeal Brief is accompanied by the required appeal fee set forth in 37 C.F.R. § 41.20(b)(2). Appellants' Notice of Appeal was filed on July 7, 2008. Therefore, the present Appeal Brief is timely filed.

09/04/2008 SZEWDIE1 00000055 193935 09889666 01 FC:1402 500.00 DA 10.00 OP

#### I. REAL PARTY IN INTEREST

The above-captioned application is assigned in its entirety to SIEMENS AKTIENGESELLSCHAFT, having a corporate situs of Wittelsbacherplatz 2, D-80333 Munich, Germany.

#### II. RELATED APPEALS AND INTERFERENCES

Appellants state that, upon information and belief, Appellants are not aware of any copending appeal or interference that will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

#### III. STATUS OF CLAIMS

Claims 5, 6, 7, 9, 11, 20, and 21 are pending in the application. Claims 1-4, 8, 10, and 12-19 were cancelled. Claims 5, 6, 7, 9, 11, 20, and 21 were rejected. The rejection of claims 5, 6, 7, 9, 11, 20, and 21 is being appealed.

#### **IV. STATUS OF AMENDMENTS**

No amendments were filed subsequent to the final Office Action mailed April 7, 2008.

#### V. SUMMARY OF CLAIMED SUBJECT MATTER

Line and page numbers are with respect to English translation of International Application PCT/DE00/00075, a copy of which was filed originally with the application.

Independent claim 21 is directed to a method of modeling an engineering activity 101 having a plurality of interrelated events with relationships defined between the events, as described at page 1, lines 5-14. In the method, the model of the engineering activity 101 is displayed with all relationships being shown, as shown in Figs. 1 and 2 and described at page 5, lines 1-8 and 22-36. Then, a first event of the engineering activity 101 is selected using a graphical user interface GUI, as described at page 3, lines 20-23 and page 6, lines 19-28. Next, connections are prepared to connect the first event of the engineering activity 101 to a set of second events of the engineering activity 101 in a cause-and-effect relationship, as shown in Figs. 1 and 2 and described at page 3, lines 13-19 and page 5, lines 22-29. Then, at least one third event of the engineering activity 101 is determined from the set of second events, as shown in Fig. 4 and described at page 2, lines 15-23 and page 7, line 17-28. Finally, at least one second connection is prepared to connect the at least one third event to the first event in a predecessor/successor relationship, as described at page 2, lines 32, 33, and 34 and page 6, lines 29-34.

#### VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The following grounds of rejection are to be reviewed in this Appeal:

- 1. The rejection of claims 5, 6, 7, 9, 11, 20 and 21 under 35 U.S.C. § 112, first paragraph, as containing subject matter which is not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
- 2. The rejection of claims 5, 6, 7, 11 and 21 under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,303,170 to Valko et al. (hereinafter "Valko").
- 3. The rejection of claims 9 and 20 under 35 U.S.C. 103(a) as being unpatentable over Valko in view of U.S. Patent No. 6,278,977 to Agrawal et al. (hereinafter "Agrawal").

#### VII. ARGUMENTS

1. Claims 5, 6, 7, 9, 11, 20 and 21 are described within the meaning of 35 U.S.C. § 112, first paragraph.

The Examiner asserts in section 3, in the last full paragraph at page 2 of the final Office Action mailed April 7, 2008 (hereinafter "the final Office Action"), that:

The specification does not describe anywhere connecting the first event of the engineering activity to a set of second events of the engineering activity in a cause-and-effect relationship. The cause-and-effect relationship between the activities is not described anywhere in the specification. Therefore, independent claim 21 has no support in the specification.

Fig. 1, to the contrary, indicates that a predecessor (activity 101) leads to a successor (result 102). In particular, connections are shown being prepared to connect a first event of an engineering activity 101 to a set of second events of the engineering activity 101. Moreover, as described at page 3, lines 2-8 of the English translation of the International Application PCT/DE00/00075 (hereinafter "the International Application"), a copy of which was filed originally with the application:

In particular, the units can represent activities and/or results of these activities. A connection of activities and results such that orientation occurs from which it is apparent, inter alia, that an activity leads to a result and this result, if appropriate, again permits another activity is particularly advantageous.

One of skill in the art would understand that an activity that *leads* to a result is substantially a cause of the result. Conversely, the result is an effect of the activity, and the International Application describes a cause-and-effect relationship between activities and results.

Moreover, as described further in the International Application at page 3, lines 8-12:

In this way, a flowchart of activities which bring about results is produced, the wide variety of activities being able to act on a single event, and an event being able to be a precondition for a multiplicity of activities.

Since activities which bring about results are represented on a flowchart, one of skill in the art would understand that an activity that *brings about* a result is substantially a cause of the result. Conversely, the result is an effect of the activity, and the International Application describes a cause-and-effect relationship between activities and results.

Furthermore, an event which is a *precondition* of an activity might be said to be a cause of the activities, while the activity might be said to be an effect of the event.

Moreover, as described further in the International Application at page 3, lines 13-19:

It is to be noted here that in a complex technical system an unwieldy "network-like" representation quickly results from the mutual dependencies between activities and results (specific activities usually being permissible only after specific results which themselves in turn required other activities).

Since specific activities are permissible only after specific results, which themselves in turn required other activities, one of skill in the art would understand that an activity that *is required* by a result is substantially a cause of the result. Conversely, the result is an effect of the activity, and the International Application describes a cause-and-effect relationship between activities and results.

Moreover, as described further in the International Application at page 5, lines 11-15:

If, for example, it is assumed that the units are embodied as activities and results, it is in particular interesting to determine which result directly follows which activity, and/or which results directly precede the activity.

Since the units, i.e. the events, are embodied as activities and results, and a result directly *follows* from an activity, one of skill in the art would understand that an activity is substantially a cause of the result. Conversely, the result is an effect of the activity, and the International Application describes a cause-and-effect relationship between activities and results.

Moreover, as shown in Fig. 3 and as described in the International Application at page 7, lines 4-9:

It is apparent that activities 301, 302, 303 and 304 follow the result 102, the activity 301 giving rise to a result 305, the activity 302 giving rise to a result 306, the activity 303 giving rise to a result 307 and the activity 304 giving rise to results 308, 309 and 310,

Since the activity 301 gives *rise* to the result 305, one of skill in the art would understand that the activity 301 is substantially a cause of the result 305. Conversely, the result 305 is an effect of the activity 301, and the International Application describes a cause-and-effect relationship between activities and results.

Explicit support for claim language, moreover, is not required. It is well-settled, rather, that the test for compliance with the *description* requirement is whether a person skilled in the art would reasonably conclude from the disclosure whose filing date is being relied on that the inventor had possession, as of the filing date, of the claimed invention. See, e.g., *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563, 19 U.S.P.Q. 2d 1111, 1116 (Fed.Cir. 1991) and cases discussed therein. How the disclosure accomplishes this fact is unimportant. *Id.* The lack of

literal basis in the specification for a negative limitation may be not be sufficient to establish a *prima facie* case for lack of descriptive support. *Ex parte Parks*, 30 U.S.P.Q. 2d 1234, 1236 (Board of Patent Appeals and Interferences 1993).

The Examiner has therefore failed to make out a <u>prima facie</u> case of lack of written description with respect to claims 5, 6, 7, 9, 11, 20 and 21. Appellants, therefore, request respectfully that the rejection of claims 5, 6, 7, 9, 11, 20 and 21 be withdrawn.

#### 2. Claims 5, 6, 7, 11 and 21 are not anticipated by Valko.

Independent claim 21 is not anticipated by Valko because Valko fails to disclose all of the features of independent claim 21. Valko, for example, discloses no "preparing first connections to connect the first event of the engineering activity to a set of second events of the engineering activity in a cause-and-effect relationship," as recited in the fifth clause of independent claim 21. Valko, rather, is determining the availability of alternative resources required before an activity can *commence*, not causes for the activity. In particular, as described in the Abstract:

For example, project/process simulation tool defines an activity; defines alternative resources required to commence the activity; determine availability of the alternative resources; and varies a duration of the activity based on the availability of the alternative resources.

Since Valko defines alternative resources required to commence an activity, Valko is not "preparing first connections to connect the first event of the engineering activity to a set of second events of the engineering activity in a cause-and-effect relationship," as recited in independent claim 21.

In Valko, moreover, successors to starting an activity are signaled when a set of prerequisites necessary to start an activity are present. Prerequisites are not causes. There is no cause-and-in effect relationship between the activity and the prerequisites to starting the activity, or between the successors to starting the activity and the activity. The activity, and the successors to starting the activity, rather, are going to start, they are just waiting to see when the prerequisites to starting the activity are present. In particular, as described in column 2, lines 43-64:

According to a third aspect there is provided a tool for computer modeling an activity within a network of activities, comprising: first determination means for determining when a first set of M prerequisites to starting the activity are present, said first determination means including means for selecting the set of from a set of N signals from a plurality of connected activities within the network wherein M is less than N but greater than 1; first signalling means, coupled to said first determination means, for signalling successors to starting of the activity when the

first set of prerequisites are present; wait means, coupled to said first signalling means, for waiting for a duration of the activity responsive to signalling of the successors starting of the activity; second determination means, coupled to said wait means, for after said waiting, determining when a second set of prerequisites to finishing the activity are present; and, second signalling means, coupled to said second determination means for signalling successors to finishing of the activity when it has been determined that the prerequisites to finishing the activity are present.

Since, in Valko, successors to starting an activity are signaled when a set of prerequisites necessary to start an activity are present, Valko is not "preparing first connections to connect the first event of the engineering activity to a set of second events of the engineering activity in a cause-and-effect relationship," as recited in independent claim 21.

In Valko, moreover, each activity may have one or more signal lines 202A-H connecting it to other activities in the network or to itself in a *feedback* loop. Feedback is gathered *after* the activity takes place, and is thus not causation. In particular, as described in column 3, lines 43, 44, and 45:

Each activity may have one or more signal lines 202A-H connecting it to other activities in the network or to itself in a feedback loop.

Since, in Valko, each activity may have one or more signal lines 202A-H connecting it to other activities in the network or to itself in a feedback loop, Valko is not "preparing first connections to connect the first event of the engineering activity to a set of second events of the engineering activity in a cause-and-effect relationship," as recited in independent claim 21.

In Valko, moreover, the model waits for signals from some number of *prerequisites* to start an activity. The activity is going to start, the model is just waiting to see when the prerequisites to starting the activity are present. In particular, as described in column 10, lines 36, 37, and 38:

In step 710 the model waits for signals from some number of prerequisites to start this activity, if any such prerequisites exist.

Since, in Valko, the model waits for signals from some number of prerequisites to start an activity, Valko is not "preparing first connections to connect the first event of the engineering activity to a set of second events of the engineering activity in a cause-and-effect relationship," as recited in independent claim 21.

The network shown in Fig. 1 of Valko, finally, is made up of a plurality of activities 102-112 selectively connected with one another by way of *signal* lines, not in a cause-and-effect

relationship, contrary to the assertion by the Examiner in section 6.1 of the final Office Action, at page 5. In particular, as described in column 3, lines 27-31:

An exemplary network of activities is illustrated in FIG. 1. The exemplary network is made up of a plurality of activities 102-112 selectively connected with one another by way of signal lines. A given activity can have a plurality of inputs and a plurality of outputs.

Since the network shown in Fig. 1 of Valko is made up of a plurality of activities 102-112 selectively connected with one another by way of signal lines, Valko is not "preparing first connections to connect the first event of the engineering activity to a set of second events of the engineering activity in a cause-and-effect relationship," as recited in independent claim 21.

The Examiner asserts in section 10.1 of the final Office Action, at page 8, lines 15-18, that:

Particularly Page 3, Lines 13-19 and Page 5, Lines 22-29 of the English translation of the International Application PCT/DE00/00075 do not describe cause-and-effect relationship. Rather, these lines describe "activities being permissible only after specific results" and "direct predecessors and direct successors given as connection criterion".

Page 3, lines 17, 18, and 19 of the International Application actually also describes the specific results as themselves in turn requiring other activities. In any case, since specific activities are permissible only after specific results, which themselves in turn required other activities, one of skill in the art would understand that an activity that *is required* by a result is substantially a cause of the result. Conversely, the result is an effect of the activity, and the International Application describes a cause-and-effect relationship between activities and results.

The Examiner asserts in section 10.2 of the final Office Action, at page 10, lines 14, 15, and 16, in section 10.3 of the final Office Action, at page 11, lines 9, 10, and 11, in section 10.4 of the final Office Action, at page 12, lines 6, 7, and 8, and in section 10.5 of the final Office Action, at page 13, lines 5, 6, and 7, that:

The Examiner takes the position that the activity network claimed by the applicant has only predecessor-successor relationship and no cause-and-effect relationship, as explained in Paragraph 10.1 above.

Claim 21, to the contrary, recites "preparing first connections to connect the first event of the engineering activity to a set of second events of the engineering activity in a cause-and-effect relationship," rather than simply a predecessor-successor relationship. Valko neither teaches, discloses, nor suggests "preparing first connections to connect the first event of the

engineering activity to a set of second events of the engineering activity in a cause-and-effect relationship," as recited an independent claim 21.

The Examiner asserts in section 10.3 of the final Office Action, at page 11, lines 12-19, that:

In addition, specification Page 1, Para 006 states, a first unit is connected to a set of second units in a predefined fashion; at least one third unit is determined from the set of second units, which has a relationship with the first unit; Page 2, Para 0011 states that **the at least one third unit can be a predecessor or successor of the first unit**. The Examiner directs the applicant to explain, if the third unit that follows the second unit that flows the first unit is the predecessor of the first unit, is there not a feedback lop from the third unit to the first unit. If it is not feedback loop, then when the third unit is the predecessor to the first unit, is it a feed forward.

Paragraphs [0006] and [0011] describe different aspects of the invention. Paragraph [0011], moreover, actually describes:

One embodiment relates to the units having a (predefined) orientation with respect to one another. In particular, the at least one third unit can be a (direct or indirect) predecessor or a (direct or indirect) successor of the first unit.

Thus, in one embodiment, at least one third unit can be a (direct or indirect) predecessor or a (direct or indirect) successor of the first unit, instead of, in addition to, or as an alternative to a feedback or feed-forward loop. Moreover, as shown in Fig. 4 and described at page 7, lines 21-28 of the International Application:

Then, the at least one third unit is determined from all the second units which are connected to the first unit (directly or indirectly), the at least one third unit having to fulfil in particular the predefined connection criterion (cf. block 402). The structural preparation takes place in a following step (cf. block 403).

Thus, in one embodiment, at least one third unit is determined from *all* the second units which are connected to the first unit (directly or indirectly), instead of, in addition to, or as an alternative to a feedback or feed-forward loop.

The Examiner asserts finally in section 10.5 of the final Office Action, at page 13, lines 16-19, that:

The Examiner takes the position that the resources feeding into the small circles send signals (in computer implementation, an interrupt or a polling has to occur, to verify the existence of the resources or results) to the activities 301 to 304, so they can start executing.

Since, as acknowledged graciously by the Examiner, Valko only verifies the existence of the

resources or results necessary for the activities 301 to 304 so they can start executing, Valko is not "preparing first connections to connect the first event of the engineering activity to a set of second events of the engineering activity in a cause-and-effect relationship," as recited an independent claim 21.

Accordingly, because Valko fails to disclose all of the features of independent claim 21, the Examiner has failed to set forth a <u>prima facie</u> case of anticipation of independent claim 21 by Valko. Appellant, therefore, requests respectfully that the rejection of independent claim 21 be withdrawn.

### 3. Claims 9 and 20 are patentable over Valko in view of Agrawal.

Claims 9 and 20 are patentable over Valko in view of Agrawal because neither Valko nor Agrawal, nor their combination, disclose all of the features of claims 9 and 20.

Claims 9 and 20 depend from claim 21 and add further distinguishing elements. Neither Valko nor Agrawal, for example, disclose "preparing first connections to connect the first event of the engineering activity to a set of second events of the engineering activity in a cause-and-effect relationship," as recited in the fifth clause of independent claim 21. Valko, rather, is determining the availability of alternative resources required before an activity can *commence*, not causes for the activity. In particular, as described in the Abstract:

For example, project/process simulation tool defines an activity; defines alternative resources required to commence the activity; determine availability of the alternative resources; and varies a duration of the activity based on the availability of the alternative resources.

Since Valko defines alternative resources required to commence an activity, Valko is not "preparing first connections to connect the first event of the engineering activity to a set of second events of the engineering activity in a cause-and-effect relationship," as recited in independent claim 21, from which claims 9 and 20 depend.

In Valko, moreover, successors to starting an activity are signaled when a set of prerequisites necessary to start an activity are present. Prerequisites are not causes. There is no cause-and-in effect relationship between the activity and the prerequisites to starting the activity, or between the successors to starting the activity and the activity. The activity, and the successors to starting the activity, rather, are going to start, they are just waiting to see when the prerequisites to starting the activity are present. In particular, as described in column 2, lines 43-64:

According to a third aspect there is provided a tool for computer modeling an activity within a network of activities, comprising: first determination means for determining when a first set of M prerequisites to starting the activity are present, said first determination means including means for selecting the set of from a set of N signals from a plurality of connected activities within the network wherein M is less than N but greater than 1; first signalling means, coupled to said first determination means, for signalling successors to starting of the activity when the first set of prerequisites are present; wait means, coupled to said first signalling means, for waiting for a duration of the activity responsive to signalling of the successors starting of the activity; second determination means, coupled to said wait means, for after said waiting, determining when a second set of prerequisites to finishing the activity are present; and, second signalling means, coupled to said second determination means for signalling successors to finishing of the activity when it has been determined that the prerequisites to finishing the activity are present.

Since, in Valko, successors to starting an activity are signaled when a set of prerequisites necessary to start an activity are present, Valko is not "preparing first connections to connect the first event of the engineering activity to a set of second events of the engineering activity in a cause-and-effect relationship," as recited in independent claim 21, from which claims 9 and 20 depend.

In Valko, moreover, each activity may have one or more signal lines 202A-H connecting it to other activities in the network or to itself in a *feedback* loop. Feedback is gathered *after* the activity takes place, and is thus not causation. In particular, as described in column 3, lines 43, 44, and 45:

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Since, in Valko, each activity may have one or more signal lines 202A-H connecting it to other activities in the network or to itself in a feedback loop, Valko is not "preparing first connections to connect the first event of the engineering activity to a set of second events of the engineering activity in a cause-and-effect relationship," as recited in independent claim 21, from which claims 9 and 20 depend.

In Valko, moreover, the model waits for signals from some number of *prerequisites* to start an activity. The activity is going to start, the model is just waiting to see when the prerequisites to starting the activity are present. In particular, as described in column 10, lines 36, 37, and 38:

In step 710 the model waits for signals from some number of prerequisites to start this activity, if any such prerequisites exist.

Since, in Valko, the model waits for signals from some number of prerequisites to start an activity, Valko is not "preparing first connections to connect the first event of the engineering activity to a set of second events of the engineering activity in a cause-and-effect relationship," as recited in independent claim 21, from which claims 9 and 20 depend.

The network shown in Fig. 1 of Valko, finally, is made up of a plurality of activities 102-112 selectively connected with one another by way of *signal* lines, not in a cause-and-effect relationship, contrary to the assertion by the Examiner in section 6.1 of the final Office Action, at page 5. In particular, as described in column 3, lines 27-31:

An exemplary network of activities is illustrated in FIG. 1. The exemplary network is made up of a plurality of activities 102-112 selectively connected with one another by way of signal lines. A given activity can have a plurality of inputs and a plurality of outputs.

Since the network shown in Fig. 1 of Valko is made up of a plurality of activities 102-112 selectively connected with one another by way of signal lines, Valko is not "preparing first connections to connect the first event of the engineering activity to a set of second events of the engineering activity in a cause-and-effect relationship," as recited in independent claim 21, from which claims 9 and 20 depend.

The Examiner acknowledged that Agrawal shows no "preparing first connections to connect the first event of the engineering activity to a set of second events of the engineering activity in a cause-and-effect relationship," in section 4.1 of the final Office Action, at page 3, lines 16, 17, and 18 of the final Office Action mailed May 24, 2007. Agrawal, rather, starts with a set of unrelated activities, and discovers the real world relationships between them at a *later* point in time. Thus, even if Valko and Agrawal were combined as proposed by the Examiner, the claimed invention would not result.

Accordingly, because neither Valko nor Agrawal, nor their combination, disclose all of the features of claims 9 and 20, the Examiner has failed to set forth a <u>prima facie</u> case of obviousness of claims 9 and 20 by Valko in view of Agrawal. Appellants, therefore, request respectfully that the rejection of claims 9 and 20 be withdrawn.

# CONTINGENT AUTHORIZATION TO CHARGE DEPOSIT ACCOUNT AND CONTINGENT PETITION FOR EXTENSION OF TIME

Unless a check for the present Brief on Appeal is submitted herewith for the fee required under 37 C.F.R. § 41.20(b)(2), please charge said fee to Deposit Account No. 19-3935.

Appellants hereby petition for any extension of time that may be required to maintain the pendency of this case, and any required fee for such extension is to be charged to Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 035555

Thomas E. McKiernan Registration No. 37,889

1201 New York Avenue, NW, 7th Floor

Washington, D.C. 20005 Telephone: (202) 434-1500 Facsimile: (202) 434-1501

#### **VIII. CLAIMS APPENDIX**

- 5. (previously presented) The method as claimed in independent claim 21, in which the events have a predecessor/successor relationship with respect to one another.
- 6. (previously presented) The method as claimed in claim 5, in which the first event precedes the third event in the predecessor/successor relationship.
- 7. (previously presented) The method as claimed in claim 5, in which the third event succeeds the first event in the predecessor/successor relationship.
- 9. (previously presented) The method as claimed in independent claim 21, in which the events have associated information, generated as results of the activities.
- 11. (previously presented) The method as claimed in independent claim 21, in which the graphical representation is effected by means of actuation using a context-sensitive menu.
- 20. (previously presented) The method as claimed in claim 7, in which the events have associated information, generated as results of the activities.
  - 21. (previously presented) A method comprising:

modeling an engineering activity having a plurality of interrelated events with relationships defined between the events;

displaying the model of the engineering activity with all relationships being shown; selecting a first event of the engineering activity using a graphical user interface; preparing first connections to connect the first event of the engineering activity to a set of second events of the engineering activity in a cause-and-effect relationship;

determining at least one third event of the engineering activity from the set of second events;

preparing at least one second connection to connect the at least one third event to the first event in a predecessor/successor relationship; and

displaying the first event together with connections selected from the group consisting of the first connections and the at least one second connection, the first event and the connections being displayed without displaying any relationship unless the relationship is defined by a first or

second connection.

# IX. EVIDENCE APPENDIX

None.

# X. RELATED PROCEEDINGS APPENDIX

None.